

**WHAT IS CLAIMED IS:**

1. A water lock system for conveying a person from a first body of water to a second body of water, the first and second bodies of water being at different elevational levels, comprising:

a chamber for holding water, the chamber being coupled to the first body of water and the second body of water;

a first movable member formed in a wall of the chamber, the first movable member being positioned to allow the person and water to move between the first body of water and the first chamber when the first movable member is open during use;

a second movable member formed in the wall of the chamber, the second movable member being positioned to allow the person and water to move between the second body of water and the chamber when the second movable member is open during use;

a bottom member positioned within the chamber, wherein the bottom member is positionable below the upper surface of water within the chamber during use;

a first conduit coupled to the chamber for conducting water to the chamber during use; and

a first water control system positioned along the first conduit, the first water control system being configured to control the flow of water through the first conduit during use.

2. The system of claim 1, wherein the chamber has a shape that resembles a figure selected from the group consisting of a square, a rectangle, a circle, a star, a regular polyhedron, a trapezoid, an ellipse, a U-shape, an L-shape, a Y-shape or a figure eight, when seen from an overhead view.

5

3. The system of claim 1, wherein the first and second movable members are configured to swing away from the chamber wall when moving from a closed position to an open position during use.

10

4. The system of claim 1, wherein the first and second movable members are configured to move vertically into a portion of the wall when moving from a closed position to an open position.

15

5. The system of claim 1, wherein the first and second movable members are configured to move horizontally along a portion of the wall when moving from a closed position to an open position.

20

6. The system of claim 1, wherein the bottom member is substantially water permeable such that water in the chamber moves freely through the bottom member as the bottom member is moved within the chamber during use.

7. The system of claim 1, wherein a distance between the bottom member and the upper surface of the water in the chamber is substantially constant during use.

25

8. The system of claim 1, wherein the bottom member comprises a wall extending from the bottom member to a position above the upper surface of the water.

9. The system of claim 1, wherein the bottom member is floating within the chamber.

30

10. The system of claim 9, wherein the bottom member comprises a wall and a floatation member, the bottom member wall encircling the bottom member and extending from the bottom member to a position above the upper surface of the water, the floatation member being positioned upon the bottom member wall at a location proximate the upper surface of the water.
11. The system of claim 10, further comprising a substantially vertical first ladder coupled to the bottom member wall and a substantially vertical second ladder coupled to the wall of the chamber, wherein the first and second ladders are substantially aligned.
12. The system of claim 1, wherein the bottom member comprises a wall extending from the bottom member to a position above the upper surface of the water, wherein the bottom member wall is configured to inhibit the person from moving to a position below the bottom member.
13. The system of claim 1, wherein the bottom member comprises a locking system coupling the bottom member to the inner surface of the chamber wall, wherein the locking system is configured to inhibit the bottom member from sinking when water is released from the chamber.
14. The system of claim 13, wherein the locking system is a ratcheted locking system.
15. The system of claim 1, wherein the water control system comprises a valve configured to control flow of water through the first conduit.
16. The system of claim 1, wherein the first conduit is further coupled to the second body of water, and wherein the first conduit is configured to transfer water between the second body of water and the chamber during use.

17. The system of claim 16, wherein the first water control system comprises a valve and a pump, wherein the valve is configured to control flow of water through the first conduit, and wherein the pump is configured to pump water between the chamber and the second body of water during use.

18. The system of claim 1, wherein the first conduit is further coupled to the first body of water, and wherein the first conduit is configured to transfer water between the first body of water and the chamber during use.

19. The system of claim 18, wherein the first water control system comprises a pump positioned along the first conduit for pumping water between the first body of water and the chamber during use.

20. The system of claim 1, further comprising a second conduit and a second water control system, the second conduit being coupled to the chamber for conducting water out of the chamber during use, the second water control system being positioned along the second conduit to control flow of water through the second conduit during use.

21. The system of claim 20, wherein the first conduit is further coupled to the second body of water, and wherein the first conduit is configured to transfer water between the second body of water and the chamber during use, and wherein the second conduit is further coupled to the first body of water, and wherein the second conduit is configured to transfer water between the chamber and the first body of water during use.

22. The system of claim 20, wherein the first conduit is further coupled to the second body of water, and wherein the first conduit is configured to transfer water between the second body of water and the chamber during use, and wherein the

second conduit is further coupled to the second body of water, and wherein the second conduit is configured to transfer water between the chamber and the second body of water during use, and wherein the second water control system comprises a pump for pumping water between the chamber and the second body of water during use.

23. The system of claim 20, wherein the first conduit is further coupled to the second body of water, and wherein the first conduit is configured to transfer water between the second body of water and the chamber during use, and wherein the second conduit is further coupled to the first body of water, and wherein the second conduit is configured to transfer water between the chamber and the first body of water during use, and further comprising a third conduit and a third water control system, the third conduit being coupled to the second body of water and the first body of water, the third water control system being positioned along the third conduit, and wherein the third water control system comprises a pump configured to pump water between the first body of water and the second body of water during use.

24. The system of claim 1, wherein the first movable member, the second movable member, and the first water control system are coupled to a controller, and wherein the controller is configured to control operation of the first movable member, the second movable member, and the first water control system during use.

25. The system of claim 1, wherein the person is riding a flotation device, and wherein the system is configured to convey the person and the flotation device without the person dismounting from the flotation device.

26. The system of claim 1, further comprising additional movable members formed in the wall, and wherein the additional movable members allow participants to enter

and exit the chamber to and from additional bodies of water positioned adjacent the chamber.

27. The system of claim 26, wherein the additional movable members are formed at different vertical positions along the chamber.

28. A system for conveying a person from a first body of water to a second body of water, the first and second bodies of water being at different elevation levels, comprising:

a first chamber coupled to the first body of water;

a first movable member formed in a wall of the first chamber, the first movable member positioned to allow the person and water to move between the first body of water and the first chamber when the first movable member is open;

a second chamber coupled to the second body of water and the first chamber such that an outer surface of a portion of the first chamber wall forms a portion of the inner surface of a second chamber wall;

a second movable member formed in the portion of the first chamber wall dividing the first chamber from the second chamber, wherein the second movable member is configured to allow the person and water to move between the first chamber and the second chamber when the second movable member is open;

a third movable member formed in the wall of the second chamber, the third movable member positioned to allow the person and water to move between the second body of water and the second chamber when the third

movable member is open;

a first bottom member positioned within the first chamber, wherein the first bottom member is positionable below the upper surface of water within the first chamber during use;

a second bottom member positioned within the second chamber, wherein the second bottom member is positionable below the upper surface of water within the second chamber during use;

a first conduit coupled to the first chamber for conducting water to the first chamber during use;

a first water control system positioned along the first conduit, the first water control system being configured to control the flow of water through the first conduit during use;

a second conduit coupled to the second chamber for conducting water to the second chamber during use; and

a second water control system positioned along the second conduit, the second water control system being configured to control the flow of water through the second conduit during use.

29. The system of claim 28, wherein the first chamber and the second chamber have a shape that resembles a figure selected from the group consisting of a square, a rectangle, a circle, a star, a regular polyhedron, a trapezoid, an ellipse or a figure eight, when seen from an overhead view.

30. The system of claim 28, wherein the first and second chambers have different

shapes.

5 31. The system of claim 28, wherein the first and second movable members are configured to swing away from the first chamber wall when moving from a closed position to an open position during use, and wherein the third movable member is configured to swing away from the second chamber wall when moving from a closed position to an open position during use.

10 32. The system of claim 28, wherein the first and second movable members are configured to move vertically into a portion of the first chamber wall when moving from a closed position to an open position, and wherein the third movable member is configured to move vertically into a portion of the second chamber wall when moving from a closed position to an open position.

15 33. The system of claim 28, wherein the first bottom member is substantially water permeable such that water in the first chamber moves freely through the first bottom member as the first bottom member is moved within the first chamber during use, and wherein the second bottom member is substantially water permeable such that water in the second chamber moves freely through the second bottom member as the second bottom member is moved within the second chamber during use.

20 34. The system of claim 28, wherein the first bottom member comprises a wall extending from the first bottom member to a position above the upper surface of the water in the first chamber, and wherein the second bottom member comprises a wall extending from the second bottom member to a position above the upper surface of the water in the second chamber.

25 35. The system of claim 28, wherein the first bottom member is configured to float within the chamber, and wherein the second bottom member is configured to float



within the chamber.

36. The system of claim 35, wherein the first bottom member comprises a first wall and a first floatation member, the first wall extending from the first bottom member to a position above the upper surface of the water in the first chamber, the first floatation member being positioned upon the first wall at a location near the upper surface of the water in the first chamber, and wherein the second bottom member comprises a second wall and a second floatation member, the second wall extending from the second bottom member to a position above the upper surface of the water in the second chamber, the second floatation member being positioned upon the second wall at a location near the upper surface of the water in the second chamber.
37. The system of claim 28, wherein the first bottom member comprises a first wall extending from the first bottom member to a position above the upper surface of the water in the first chamber, and wherein the first wall is coupled to the first bottom member such that the first wall inhibits the person from moving to a position below the first bottom member, and wherein the second bottom member comprises a second wall extending from the second bottom member to a position above the upper surface of the water in the second chamber, and wherein the second wall is coupled to the second bottom member such that the second wall inhibits the person from moving to a position below the second bottom member.
38. The system of claim 28, wherein the first bottom member comprises a first ratcheted locking system coupling the first bottom member to the inner surface of the first chamber wall, and wherein the first ratcheted locking system is configured to inhibit the first bottom member from sinking when water is released from the first chamber, and wherein the second bottom member comprises a second ratcheted locking system coupling the second bottom member to the inner surface of the second chamber walls, and wherein the second ratcheted locking

system is configured to inhibit the second bottom member from sinking when water is released from the second chamber.

39. The system of claim 28, wherein the first and second conduits are further coupled to the second body of water, and wherein the first conduit is configured to transfer water between the second body of water and the first chamber during use, and wherein the second conduit is configured to transfer water between the second body of water and the second chamber during use.

40. The system of claim 28, wherein the first and second conduits are further coupled to the first body of water, and wherein the first conduit is configured to transfer water between the first body of water and the first chamber during use, and wherein the second conduit is configured to transfer water between the first body of water and the second chamber during use.

41. The system of claim 40, wherein the first water control systems comprises a first pump, and wherein the second water control system comprises a second pump, the first pump being positioned along the first conduit for pumping water between the first body of water and the first chamber during use, the second pump being positioned along the second conduit for pumping water between the first body of water and the second chamber during use.

42. The system of claim 28, wherein the first conduit is further coupled to the second chamber, and wherein the first conduit is configured to transfer water between the second chamber and the first chamber during use, and wherein the second conduit is further coupled to the second body of water, and wherein the second conduit is configured to transfer water between the second body of water and the second chamber during use.

43. The system of claim 42, further comprising:

a third conduit coupled to the first chamber for conducting water out of the first chamber during use; and

5 a third water control system positioned along the third conduit, the third valve being configured to control flow of water through the third conduit during use.

44. The system of claim 28, further comprising:

10 a third conduit coupled to the first chamber for conducting water out of the first chamber during use;

15 a third water control system positioned along the third conduit, the third valve being configured to control the flow of water through the third conduit during use;

a fourth conduit coupled to the second chamber for conducting water out of the second chamber during use; and

20 a fourth water control system positioned along the fourth conduit, the fourth valve being configured to control the flow of water through the fourth conduit during use.

45. The system of claim 44, wherein the first and second conduits are further coupled to the second body of water, and wherein the first conduit is configured to transfer water between the second body of water and the first chamber during use, and  
25 wherein the second conduit is configured to transfer water between the second body of water to the second chamber during use, and wherein the third and fourth conduits are further coupled to the first body of water, and wherein the third conduit is configured to transfer water between the first chamber and the first  
30 body of water during use, and wherein the fourth conduit is configured to transfer

water between the second chamber and the first body of water during use.

5 46. The system of claim 28, further comprising a third conduit and a third water control system, the third conduit being coupled to the second body of water and the first body of water, the third water control system being positioned along the third conduit, wherein the third water control system comprises a pump configured to pump water between the first body of water and the second body of water during use.

10 47. The system of claim 28, wherein the first movable member, the second movable member, the third movable member, the first water control system, and the second water control system are coupled to a controller, and wherein the controller is configured to operate the first, second, and third movable members during use, and wherein the controller is configured to operate the first and second water control systems during use.

15 48. A method for transferring a person from a first body of water to a second body of water, the first and second bodies of water being at different elevational levels, comprising:

20 transferring the person from the first body of water into a water lock system, the water lock system comprising:

25 a chamber for holding water coupled to the first body of water and the second body of water;

30 a first movable member formed in the wall of the chamber, the first movable member being positioned to allow the person and water to move between the first body of water and the first chamber when

the first movable member is open during use;

a second movable member formed in the wall of the chamber, the second movable member being positioned to allow the person and water to move between the second body of water and the chamber when the second movable member is open during use;

a bottom member positioned within the chamber, wherein the bottom member is positionable below the upper surface of water within the chamber during use;

a first conduit coupled to the chamber for conducting water to the chamber during use; and

a first water control system positioned along the first conduit, the first water control system being configured to control the flow of water through the first conduit during use;

wherein transferring the person to the water lock system comprises moving the person from the first body of water into the chamber through the first movable member;

closing the first movable member;

altering the level of water within the chamber with water such that the upper surface of the water in the chamber is substantially equal to the upper surface of the water in the second body of water;

opening the second movable member; and

transferring the person from the chamber to the second body of water through the second movable member.

49. The method of claim 48, further comprising altering the level of water within the chamber such that an upper surface of the water in the chamber is substantially equal to the upper surface of the water in the first body of water prior to transferring the person from the first body of water to the lock system.

50. The method of claim 48, further comprising placing the person on a flotation device prior to transferring the person to the chamber.

51. The method of claim 48, wherein transferring the person to the water lock system comprises generating a current of water flowing from the first body of water toward the water lock system and positioning the person within the current of water, wherein the current of water carries the person into the chamber of the water lock system.

52. The method of claim 48, wherein transferring the person from the chamber to the second body of water comprises generating a current of water flowing from the chamber toward the second body of water and positioning the person within the current of water, wherein the current of water carries the person into the chamber of the water lock system.

53. The method of claim 52, wherein generating a current comprises filling the chamber with water while the second movable member is open.

54. The method of claim 48, wherein the first movable member is configured to swing away from the chamber wall, and wherein the second movable member is configured to swing away from the chamber wall during use, and wherein closing the first movable member comprises swinging the movable member toward the

60. The method of claim 59, further comprising a second water control system positioned along the second conduit, the second water control system comprising a pump for pumping water along the second conduit.

5 61. The method of claim 59, wherein the water lock system further comprises a third conduit and a third water control system, the third conduit being coupled to the second body of water and the first body of water, the third water control system comprising a pump positioned along the third conduit, and wherein the pump is configured to pump water between the first body of water and the second body of water, and further comprising transferring water between the first body of water and the second body of water.

10 62. A method for transferring a person from a first body of water to a second body of water, the first and second bodies of water being at different elevational heights, comprising:

15 transferring the person from the first body of water into a water lock system, the water lock system comprising:

20 a first chamber coupled to the first body of water;

25 a first movable member formed in a wall of the first chamber, the first movable member positioned to allow the person and water to move between the first body of water and the first chamber when the first movable member is open;

30 a second chamber coupled to the second body of water and the first chamber, wherein an outer surface of a portion of the first chamber wall forms a portion of the inner surface of a second chamber wall;

a second movable member formed in the portion of the first chamber wall dividing the first chamber from the second chamber, wherein the second movable member is configured to allow the person and water to move between the first chamber and the second chamber when the second movable member is open;

a third movable member formed in the wall of the second chamber, the third movable member positioned to allow the person and water to move between the second chamber and the second body of water when the third movable member is open;

a first bottom member positioned within the first chamber, wherein the first bottom member is positionable below the upper surface of water within the first chamber during use;

a second bottom member positioned within the second chamber, wherein the second bottom member is positionable below the upper surface of water within the second chamber during use;

a first conduit coupled to the first chamber for conducting water to the first chamber during use;

a first water control system positioned along the first conduit, the first water control system being configured to control the flow of water through the first conduit during use;

a second conduit coupled to the second chamber for conducting water to the second chamber during use; and

a second water control system positioned along the second conduit,



the second water control system being configured to control the flow of water through the second conduit during use;

wherein transferring the person to the water lock system comprises moving the person from the first body of water into the first chamber through the first movable member;

closing the first movable member;

altering the level of water in the first chamber such that the upper surface of the water in the first chamber is substantially equal to a portion of the second movable member;

altering the level of water in the second chamber such that the upper surface of the water in the second chamber is substantially equal to a portion of the second movable member;

opening the second movable member;

transferring the person from the first chamber to the second chamber through the second movable member;

closing the second movable member;

altering the level of water in the second chamber with water such that the upper surface of the water in the second chamber is substantially equal to the upper surface of the water of the second body of water;

opening the third movable member; and

58

transferring the person from the second chamber to the second body of water.

5 63. The method of claim 62, further comprising altering the level of water in the first chamber such that an upper surface of the water in the first chamber is substantially equal to the upper surface of the water in the first body of water prior to transferring the person from the first body of water to the lock system.

10 64. The method of claim 62, further comprising placing the person on a flotation device prior to transferring the person to the first chamber.

15 65. The method of claim 62, wherein the first conduit is further coupled to the second chamber, and wherein altering the level of water in the first chamber comprises transferring water between the second chamber and the first chamber through the first conduit, and wherein altering the level of water in the second chamber comprises transferring water between the first chamber and the second chamber through the first conduit.

20 66. The method of claim 62, further comprising altering the level of water in the first chamber while altering the level of water in the second chamber.

25 67. The method of claim 62, further comprising altering the level of the water in the first chamber until the upper surface of the water in the first chamber is substantially equal to the upper surface of the water in the first body of water subsequent to transferring the person to the second chamber.

68. The method of claim 62, further comprising altering the level of the water in the second chamber until the upper surface of the water in the second chamber is

59

chamber wall, and wherein opening the second movable member comprises swinging the second movable member away from the chamber wall.

55. The method of claim 48, wherein the first movable member is configured to move vertically into a portion of the chamber wall, and wherein the second movable member is configured to move vertically into a portion of the chamber wall during use, and wherein closing the first movable member comprises moving the first movable member out of the chamber wall, and wherein opening the second movable member comprises moving the second movable member into the chamber wall.

56. The method of claim 48, wherein the first conduit is further coupled to the second body of water, and wherein altering the level of water in the chamber comprises transferring water between the second body of water and the chamber through the first conduit.

57. The method of claim 48, wherein the first conduit is further coupled to the first body of water, and wherein altering the level of water in the chamber comprises transferring water between the first body of water and the chamber through the first conduit.

58. The method of claim 48, further comprising altering the level of the water in the chamber until the upper surface of the water in the chamber is substantially equal to the upper surface of the water in the first body of water subsequent to transferring the person to the second body of water.

59. The method of claim 48, wherein the water lock system further comprises a second conduit and a second water control system, the second conduit being coupled to the chamber for conducting water out of the chamber during use.

substantially equal to a portion of the second movable member subsequent to transferring the person to the second body of water.

69. The method of claim 62, further comprising altering the level of the water in the first chamber until the upper surface of the water in the first chamber is substantially equal to the upper surface of the water in the first body of water subsequent to transferring the person to the second chamber, and further comprising altering the level of the water in the second chamber until the upper surface of the water in the second chamber is substantially equal to a portion of the second movable member subsequent to transferring the person to the second body of water.

70. The method of claim 62, wherein the water lock system further comprises:

a third conduit coupled to the first chamber for conducting water out of the first chamber during use;

a third water control system positioned along the third conduit, the third water control system being configured to control the flow of water through the third conduit during use;

a fourth conduit coupled to the second chamber for conducting water out of the second chamber during use; and

a fourth water control system positioned along the fourth conduit, the fourth water control system being configured to control the flow of water through the fourth conduit during use.

71. The method of claim 62, wherein transferring the person from the first chamber to the second chamber comprises generating a current of water flowing from the first

chamber toward the second chamber and positioning the person within the current of water, wherein the current of water carries the person into the second chamber.

72. The method of claim 62, wherein generating a current comprises filling the first chamber with water while the second movable member is open.

73. The method of claim 62, wherein transferring the person from the second chamber to the second body of water comprises generating a current of water flowing from the second chamber toward the second body of water and positioning the person within the current of water, wherein the current of water carries the person into the second body of water.

74. The method of claim 73, wherein generating a current comprises filling the second chamber with water while the third movable member is open.

75. An amusement park system, comprising:

a water ride, wherein the water ride is configured to convey a person from an upper body of water to a lower body of water; and

a water lock system, the water lock system comprising:

a chamber for holding water coupled to the lower body of water and the upper body of water;

a first movable member formed in the wall of the chamber, the first movable member being positioned to allow the person and water from the first body of water to enter the first chamber when the first movable member is open during use;

a second movable member formed in the wall of the chamber, the second movable member being positioned to allow the person and water from the chamber to enter the second body of water when the second movable member is open during use;

a bottom member positioned within the chamber, wherein the bottom member is positionable below the upper surface of water within the chamber during use;

a first conduit coupled to the chamber for conducting water to the chamber during use; and

a first water control system positioned along the first conduit, the first water control system being configured to control the flow of water through the first conduit during use.

76. The system of claim 75, wherein the chamber has a shape that resembles a figure selected from the group consisting of a square, a rectangle, a circle, a star, a regular polyhedron, a trapezoid, an ellipse, a U-shape, a T-shape, an L-shape, a Y-shape or a figure eight, when seen from an overhead view.
77. The system of claim 75, wherein the second movable member is formed in the wall at an elevation substantially higher than the first movable member.
78. The system of claim 75, wherein the first and second movable members are configured to swing away from the chamber wall when moving from a closed position to an open position during use.

79. The system of claim 75, wherein the first and second movable members are configured to move vertically into a portion of the wall when moving from a closed position to an open position.

5 80. The system of claim 75, wherein the first and second movable members are configured to move horizontally along a portion of the wall when moving from a closed position to an open position.

10 81. The system of claim 75, wherein the bottom member is substantially water permeable such that water in the chamber moves freely through the bottom member as the bottom member is moved within the chamber during use.

15 82. The system of claim 75, wherein a distance between the bottom member and the upper surface of the water in the chamber is substantially constant during use.

83. The system of claim 75, wherein the bottom member comprises a wall extending from the bottom member to a position above the upper surface of the water.

20 84. The system of claim 75, wherein the bottom member is floating within the chamber during use.

25 85. The system of claim 84, wherein the bottom member comprises a wall and a floatation member, the bottom member wall encircling the bottom member and extending from the bottom member to a position above the upper surface of the water, the floatation member being positioned upon the bottom member wall at a location proximate the upper surface of the water.

86. The system of claim 83, further comprising a substantially vertical first ladder coupled to the bottom member wall and a substantially vertical second ladder

coupled to the chamber wall, wherein the first and second ladder are substantially aligned.

5 87. The system of claim 75, wherein the bottom member comprises a ratcheted locking system coupling the bottom member to the inner surface of the chamber wall, wherein the ratcheted locking system is configured to inhibit the bottom member from sinking when water is released from the chamber.

10 88. The system of claim 75, wherein the water control system comprises a valve and a pump, wherein the valve is configured to control the flow of water through the conduit, and wherein the pump is configured to pump water through the conduit during use.

15 89. The system of claim 75, wherein the first movable member, the second movable member, and the first water control system are coupled to a controller, and wherein the controller is configured to control operation of the first movable member, the second movable member, and the first water control system during use.

20 90. The system of claim 75, wherein the person is riding a flotation device.

25 91. The system of claim 75, further comprising additional movable members formed in the wall, wherein the additional movable members allow participants to enter and exit the chamber from additional bodies of water positioned adjacent the chamber.

92. The system of claim 91, wherein the additional movable members are formed at different elevational levels.



5

- CH